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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,384	09/24/2003	Cem Basceri	150.01170103	3937
26813	7590	12/15/2005	EXAMINER	
MUETING, RAASCH & GEBHARDT, P.A.			PE, MARK D	
P.O. BOX 581415			ART UNIT	
MINNEAPOLIS, MN 55458			PAPER NUMBER	
			2811	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/669,384

Applicant(s)

BASCERI ET AL.

Examiner

Mark D. Pe

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 67-114 is/are pending in the application.
- 4a) Of the above claim(s) 96-114 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67-87 is/are allowed.
- 6) ☒ Claim(s) 88 is/are rejected.
- 7) ☒ Claim(s) 89-95 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20031229.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of group I (claims 67-95) in the reply filed on 10/18/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 88 rejected under 35 U.S.C. 102(e) as being anticipated by Yang et al. (US 6417537) in Figure 2H.

**With respect to claim 88**, Yang et al. (US 6417537) discloses, "A method in use in fabrication of integrated circuits comprising:

providing a substrate assembly comprising a surface, wherein the surface comprises oxygen (235; Col. 6 lines 1-3);

forming a platinum layer on at least a portion of the surface (245; Col. 6: lines 39-47);

Art Unit: 2811

forming a ruthenium layer (250; Col. 7: lines 5-22) on at least portions of the platinum layer (245);

forming ruthenium oxide regions on at least portions of the platinum layer through selective oxidation of the ruthenium layer (Col. 7: lines 5-22 and Col. 8: lines 26-36).

***Allowable Subject Matter***

3. Claims 67-87 allowed.

4. The following is an examiner's statement of reasons for allowance.

Cuchiaro et al. (US 5723171) discloses, "A method for use in fabrication of integrated circuits comprising:  
providing a substrate assembly comprising a surface, wherein the surface comprises oxygen (Fig. 4-5: 324);

forming a first metal layer on at least a portion of the surface (326);

forming a second metal layer on at least a portion of the first metal layer (328);

forming an oxidation diffusion barrier layer (329) on at least a portion of the second metal layer.

Cuchiaro does not teach causing oxygen to diffuse through the first metal layer to oxidize one or more regions of the second metal layer.

The prior art does not teach or fairly suggest, in combination with the other claimed features, oxidizing through diffusion of oxygen from the oxygen-containing

surface through the first metal layer to oxidize the second metal layer which was formed on at least a portion of the first metal layer.

5. Claims 89-95 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is an examiner's statement of reasons for allowance.

Yang et al. (US 6417537) discloses, "A method for use in fabrication of integrated circuits comprising:

providing a substrate assembly comprising a surface, wherein the surface comprises oxygen;

forming a platinum layer on at least a portion of the surface;

forming a ruthenium layer on at least a portion of the platinum layer; and

forming ruthenium oxide on at least portions of the platinum layer through selective oxidation of the ruthenium layer.

Yang et al. (US 6417537) does not teach diffusion of oxygen through one or more grain boundaries of the platinum layer to oxidize one or more regions of the ruthenium layer during treating the substrate thermally.

The prior art does not teach or fairly suggest, in combination with the other claimed features oxidizing one or more region of the ruthenium layer through diffusion of oxygen from the platinum grain boundary during treating the substrate thermally.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark D. Pe whose telephone number is (571)272-8780. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571)272-1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MDP

  
GEORGE ECKERT  
PRIMARY EXAMINER